03050109-040

(Saluda River)

General Description

Watershed 03050109-040 is located in Pickens and Greenville Counties and consists primarily of the *Saluda River* and its tributaries from its origin to Big Creek. The watershed occupies 91,064 acres of the Piedmont region of South Carolina. The predominant soil types consist of an association of the Madison-Cecil-Davidson series. The erodibility of the soil (K) averages 0.24; the slope of the terrain averages 25%, with a range of 2-80%. Land use/land cover in the watershed includes: 10.65% urban land, 14.98% agricultural land, 3.23% scrub/shrub land, 0.63% barren land, 69.96% forested land, and 0.55% water.

Tributaries draining into the upper portion of this watershed include Shoal Creek, Armstrong Creek, Machine Creek (Doddies Creek), and Coopers Creek. The Saluda River then flows through Saluda Lake (used for power, municipal, and industrial purposes) in the City of Greenville, and is joined by Mill Creek and the Georges Creek watershed (03050109-050). Further downstream, Craven Creek, the Big Brushy Creek watershed (03050109-060), and Hurricane Creek drain into the river. Little Grove Creek and another Mill Creek join to form Grove Creek, which flows into the river at the base of the watershed. This watershed contains a total of 182.2 stream miles, all classified FW.

Water Quality

Station #	Type	Class	Description
S-866	BIO	FW	SHOALS CREEK AT SR 140
S-250	P	FW	SALUDA RIVER AT FARRS BRIDGE ON SC 183
S-314	W	FW	SALUDA LAKE, 0.5 MI UPSTREAM OF LANDING
S-315	P	FW	MILL CREEK AT BENT BRIDGE RD, BELOW CAROLINA PLATING
S-007	P	FW	SALUDA RIVER AT SC 81, SW OF GREENVILLE
S-267	S	FW	TRIB TO SALUDA R. 350 FT BELOW W.PELZER WWTP ON S-23-53
S-171	S	FW	GROVE CREEK BELOW JP STEVENS ESTES PLT
S-774	BIO	FW	GROVE CREEK AT S-23-541
S-119	S	FW	SALUDA RIVER AT S-04-178, 3.2 MI SE WILLIAMSTON

Saluda River - There are three monitoring sites along this section of the Saluda River, which was Class B until April, 1992. At the upstream site (S-250), aquatic life uses are fully supported. P,P'DDT and P,P'DDE (a metabolite of DDT) were detected in the 1994 sediment sample. Although the use of DDT was banned in 1973, it is very persistent in the environment. Recreational uses are partially supported due to fecal coliform bacteria excursions, compounded by a significant increasing trend in fecal coliform bacteria. At the midstream site (S-007), aquatic life uses are not supported due to occurrences of copper and zinc in excess of the aquatic life acute standards, including a high concentration of copper measured in 1996 and high concentrations of zinc measured in 1993 and 1996. Recreational uses are also partially supported at this site due to fecal coliform bacteria excursions. Significant decreasing trends in five-day biochemical oxygen demand, total phosphorus concentration, and total nitrogen concentrations suggest improving conditions for the two upstream stations for these parameters. At the downstream site (S-119), aquatic life and recreational uses are fully supported. Significant decreasing trends in five-day biochemical oxygen demand and total phosphorus concentrations suggest improving conditions for these parameters. Aquatic life uses at all sites have a significant increasing trend in turbidity.

***Saluda Lake (S-314)* - Saluda Lake is a 500-acre impoundment on the Saluda River, with a maximum**

depth of approximately 12.2m and an average depth of approximately 2.4m. The lake's watershed comprises 674.4km^2. Eutrophication assessments indicate that Saluda Lake is one of the least eutrophic small lakes in South Carolina, characterized by low phosphorus concentrations and high levels of dissolved oxygen. Preservation of this lake's desirable trophic condition is recommended.
Aquatic life and recreational uses are fully supported at this site. Human health standards for mercury were exceeded once in 1997.

Unnamed Saluda River Tributary (S-267) **- Aquatic life uses are fully supported, but there is a significant decreasing trend in dissolved oxygen and a significant increasing trend in turbidity. A significant decreasing trend in total phosphorus concentration suggests improving conditions for this parameter. Recreational uses are not supported due to fecal coliform bacteria excursions.**

Mill Creek (S-315) **- This stream was Class B until April, 1992. Aquatic life uses are not supported due to occurrences of chromium, copper, and zinc in excess of the aquatic life acute standards, including very high concentrations of chromium measured annually from 1993-1997, high concentrations of zinc measured in 1993 and 1994, and a very high concentration of zinc measured in 1993. Human health standards for chromium are consistently exceeded. Signs have been posted on this creek advising people to avoid swimming, wading, drinking, or other contact with water from the creek, and not to consume fish from the creek. This chromium is finding its way into the stream from groundwater contamination originating at the old Carolina Plating and Stamping site. Significant decreasing trends in total phosphorus concentrations and turbidity suggest improving conditions for these parameters. Recreational uses are not supported at this site due to fecal coliform bacteria excursions.**

Grove Creek **- There are two monitoring sites along Grove Creek, which was Class B until April, 1992. At the upstream site (S-171), aquatic life uses are fully supported. Significant decreasing trends in five-day biochemical oxygen demand and total phosphorus concentrations suggest improving conditions for these parameters. Recreational uses are not supported at this site due to fecal coliform bacteria excursions. Aquatic life uses are partially supported at the downstream site (S-774) based on macroinvertebrate community data.**

Shoals Creek (S-866) **- Aquatic life uses are fully supported based on macroinvertebrate community data.**

Permitted Activities

Point Source Contributions

RECEIVING STREAM *FACILITY NAME* *PERMITTED FLOW @ PIPE (MGD)* *COMMENT*	*NPDES#* *TYPE* *LIMITATION*
SALUDA RIVER **DUKE ENERGY CORP./LEE STEAM STATION** **PIPES #: 001-004 FLOW: M/R**	**SC0002291** **MAJOR INDUSTRIAL** **EFFLUENT**
SALUDA RIVER **WCRSA/PIEDMONT PLANT** **PIPE #: 001 FLOW: 1.200**	**SC0023906** **MAJOR MUNICIPAL** **EFFLUENT**
SALUDA RIVER **WCRSA/AVICE DALE PLANT** **PIPE #: 001 FLOW: 0.035**	**SC0036072** **MINOR MUNICIPAL** **EFFLUENT**
SALUDA RIVER **WCRSA/SALUDA RIVER PLANT** **PIPE #: 001 FLOW: 0.500**	**SC0034568** **MINOR MUNICIPAL** **EFFLUENT**
SALUDA RIVER **WCRSA/PARKER PLANT** **PIPE #: 001 FLOW: 0.20**	**SC0037451** **MINOR MUNICIPAL** **EFFLUENT**
SALUDA RIVER **WCRSA/LAKESIDE PLANT** **PIPE #: 001 FLOW: 0.7**	**SC0037460** **MINOR MUNICIPAL** **EFFLUENT**
SALUDA RIVER **TOWN OF PELZER** **PIPE #: 001 FLOW: 0.20**	**SC0040797** **MINOR MUNICIPAL** **EFFLUENT**
SALUDA RIVER **TOWN OF WILLIAMSTON** **PIPE #: 001 FLOW: 1.0** **PROPOSED**	**SC0046841** **MAJOR MUNICIPAL** **EFFLUENT**
SALUDA RIVER **WCRSA/GROVE CREEK PLT** **PIPE #: 001 FLOW: 2.000** **PROPOSED**	**SC0047309** **MAJOR MUNICIPAL** **EFFLUENT**
SALUDA RIVER TRIBUTARY **VULCAN MATERIALS CO.** **PIPE #: 002 FLOW: M/R**	**SC0002950** **MINOR INDUSTRIAL** **EFFLUENT**
SALUDA RIVER TRIBUTARY **BIBB TOWELS, INC.** **PIPE #: 001 FLOW: M/R**	**SCG250093** **MINOR INDUSTRIAL** **EFFLUENT**
SALUDA RIVER TRIBUTARY **TOWN OF WEST PELZER** **PIPE #: 001 FLOW: 0.200** **WQL FOR NH3-N, DO, TRC**	**SC0025194** **MINOR MUNICIPAL** **WATER QUALITY**

SALUDA RIVER TRIBUTARY **FOREST HILL SD** **PIPE #: 001 FLOW: 0.008** **WQL FOR NH3-N, DO, TRC**	**SC0028525** **MINOR DOMESTIC** **WATER QUALITY**
SALUDA LAKE **EASLEY COMBINED UTILITY** **PIPE #: 001-010 FLOW: M/R**	**SCG641007** **MINOR DOMESTIC** **EFFLUENT**
SHOAL CREEK **DACUSVILLE ELEM. & HIGH SCHOOL** **PIPE #: 001 FLOW: 0.014** **WQL FOR NH3-N, TRC**	**SC0028754** **MINOR DOMESTIC** **WATER QUALITY**
GROVE CREEK **WCRSA/GROVE CREEK PLT** **PIPE #: 001 FLOW: 2.000** **WQL FOR NH3-N, TRC, DO**	**SC0024317** **MAJOR MUNICIPAL** **WATER QUALITY**
GROVE CREEK TRIBUTARY **AMOCO PERFORMANCE PRODUCTS** **PIPE #: 001-005 FLOW: M/R**	**SCG250009** **MINOR INDUSTRIAL** **EFFLUENT**
GROVE CREEK TRIBUTARY **DELTA MILLS/ESTES PLT** **PIPE #: 001-005 FLOW: M/R**	**SCG250143** **MINOR INDUSTRIAL** **EFFLUENT**
GROVE CREEK TRIBUTARY **VALLEY BROOK SD** **PIPE #: 001 FLOW: 0.06** **WQL FOR NH3-N, DO, TRC**	**SC0028673** **MINOR COMMUNITY** **WATER QUALITY**

LAND APPLICATION FACILITY NAME	***PERMIT # TYPE***
SPRAY IRRIGATION **AIR PRODUCTS**	**ND0003000** **MINOR INDUSTRIAL**

Landfill Activities

SOLID WASTE LANDFILL NAME FACILITY TYPE	***PERMIT # STATUS***
PIEDMONT LANDFILL, PHASE I **MUNICIPAL**	**DWP-009** **CLOSED**
PIEDMONT LANDFILL, PHASE II **MUNICIPAL**	**DWP-074** **CLOSED**
PIEDMONT LANDFILL, PHASE III **MUNICIPAL**	**DWP-095** **CLOSED**
GREATER GREENVILLE LANDFILL **MUNICIPAL**	**DWP-022** **CLOSED**
BLACKBERRY VALLEY LANDFILL **MUNICIPAL**	**DWP-107** **CLOSED**
GRACE ROAD LANDFILL	**DWP-077**

MUNICIPAL	CLOSED

Mining Activities

MINING COMPANY / *MINE NAME* / *COMMENT*	*PERMIT #* / *MINERAL*
THOMAS SAND COMPANY RIVER ROAD PLANT INACTIVE INSTREAM DREDGING (SALUDA RIVER)	0908-04 SAND
SALUDA LAKE ASSOC. SALUDA LAKE MINE	1103-39 SAND
VULCAN MATERIALS CO. LAKESIDE QUARRY	0064-23 GRANITE

Groundwater Concerns

The groundwater in the area owned by Carolina Plating & Stamping is contaminated with metals as a result of a spill. The facility is adding more pumping wells and an additional assessment is ongoing. The surface water affected by the groundwater contamination is Mill Creek, which flows directly into the Saluda River in the upper region of the watershed.

The groundwater in the vicinity of the land owned by JP Stevens (Piedmont Plant) is contaminated with volatile organics from unpermitted disposal practices. The facility is beginning the remedial design phase. The surface water affected by the groundwater contamination is an unnamed tributary to the Saluda River near the Big Brushy Creek drainage.

Water Supply

WATER USER (TYPE) / *WATERBODY*	*REGULATED CAPACITY (MGD)* / *PUMPING CAPACITY (MGD)*
EASLEY COMBINED UTILITY (M) SALUDA LAKE	10.1 15.1
GERBER CHILDRENSWEAR (I) SALUDA RIVER	5.76 4,000 GPM
SOFT CARE APPAREL (I) SALUDA RIVER	2.88 2,000 GPM

Growth Potential

The upper area of the watershed has a fairly low potential for extensive development or intensive agricultural (other than orchards), except for nonintensive agricultural and low density residential activity along the Saluda River. The center and lower regions of the watershed have a relatively high potential for urban development; rail lines run through these areas along the Saluda River. Significant growth is projected along both sides of the Saluda River from SC 183 to Williamston. The Southern Connector

combined with I-85 interchanges and highway improvements of US 25 and SC 20 will continue to spur industrial and commercial growth. The Saluda River bisects the US 123 high growth corridor between the Cities of Easley and Greenville.